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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,302	11/14/2001	Kishan Sheno	SYMM:045US/10107180	5363

38396 7590 02/10/2005

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EXAMINER

BAYARD, DJENANE M

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,302

Applicant(s)

SHENOI ET AL.

Examiner

Djenane M Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/09/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,7, 10,15 and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,450,394 to Gruber et al.

a. As per claims 1 and 18-21, Gruber et al teaches a delay monitoring for telecommunications networks. Furthermore, Gruber et al teaches generating a time-stamp information cell at a first location (See col. 4, lines 13-14)) transmitting the time-stamp information cell to a second location via a network link (See col. 4, lines 67-68) and receiving the time-stamp information cell at the second location (See col. 4, lines 15-16).

b. As per claim 7, Gruber et al teaches the claimed invention as described above. Furthermore, Gruber et al teaches wherein transmitting the time-stamp information cell at a second location via the network link includes transmitting the time-stamp information cell to the second location via an asynchronous transfer mode network link (See col. 3, lines 13-30).

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c. As per claim 10, Gruber et al teaches the claimed invention as described above.

Furthermore, Gruber et al teaches re-transmitting the time-stamp information cell back to the first location via the network link; and receiving the time-stamp information cell at the first location (See col. 4, lines 20-22).

d. As per claim 15, Gruber et al teaches the claimed invention as described above.

Furthermore, Gruber et al teaches wherein generating a time-stamp information cell includes providing a cell containing a plurality of octets; utilizing a first set of the plurality of octets to hold an identifier; utilizing a second set of the plurality of octets to hold a transmit sequence number; utilizing a third set of the plurality of octets to hold a transmit time-stamp; utilizing a fourth set of the plurality of octets to hold a last received sequence number; and utilizing a fifth set of the plurality of octets to hold a last received sequence number associated time-stamp (See figure 3 and col. 7, lines 15-55).

3. Claims 22-23 and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. 2002/0131484 to Diepstraten et al.

a. As per claim 22, Diepstraten et al teaches an asynchronous transfer mode network including time delay information cell generator (See page 3, paragraph [0035] and figure 2).

b. As per claim 23, Diepstraten et al teaches a memory containing a plurality of time delay information cells (See page 3, paragraph [0036] and figure 2)

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c. As per claim 25, Diepstraten et al teaches wherein the plurality of time delay information cells include a received time delay information cell (See page 3, paragraph [0043]).

d. As per claim 26, Diepstraten et al teaches wherein the time information cell generator includes a main clock; a set of counters coupled to the main clock; a synchronization signal source coupled to the set of counters; a time-stamp signal coupled to the set of counters (See page 3, paragraph [0034-0042]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,450,394 to Gruber et al in view of U.S Patent No. 6,816,510 to Banerjee.

a. As per claim 2, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach synchronizing the first location and the second location with a coordinated time.

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Banerjee teaches a method for clock synchronization between nodes in a packet network. Furthermore, Banerjee teaches wherein the clocks are synchronized when the proper sequence of packets have been received by the Node B and the proper timer values are compared (See col. 7, lines 14-17).

It would have obvious to one with ordinary skill in the art at the time the invention was made to incorporate synchronizing the first location and the second location with a coordinated time as taught by Banerjee in the claimed invention of Gruber et al in order to synchronize clocks in packet networks which have variable or fixed length packets and that support variable synchronization intervals (See col. 1, lines 8-10).

b. As per claim 11, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein re-transmitting the time-stamp information cell includes adding a last received sequence number to the time-stamp information cell and transmitting the time-stamp information cell.

Banerjee teaches wherein re-transmitting the time-stamp information cell includes adding a last received sequence number to the time-stamp information cell and transmitting the time-stamp information cell (See col. 7, lines 2-7).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein re-transmitting the time-stamp information cell includes adding a last received sequence number to the time-stamp information cell and transmitting the time-stamp information cell as taught by Banerjee in the claimed invention of

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Gruber et al in order to synchronize clocks in packet networks which have variable or fixed length packets and that support variable synchronization intervals (See col. 1, lines 8-10).

c. As per claim 12, Gruber et al teaches the claimed invention as described above.

However, Gruber et al failed to teach wherein re-transmitting the time-stamp information cell includes adding a last received sequence number associated time-stamp to the time-stamp information cell and transmitting the time-stamp information.

Banerjee teaches wherein re-transmitting the time-stamp information cell includes adding a last received sequence number associated time-stamp to the time-stamp information cell and transmitting the time-stamp information (See col. 7, lines 2-7).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein re-transmitting the time-stamp information cell includes adding a last received sequence number associated time-stamp to the time-stamp information cell and transmitting the time-stamp information as taught by Banerjee in the claimed invention of Gruber et al in order to synchronize clocks in packet networks which have variable or fixed length packets and that support variable synchronization intervals (See col. 1, lines 8-10).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,450,394 to Gruber et al in view of U.S. Patent Application No. 2001/0053130 to Tanaka et al.

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a. As per claim 3, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein generating the time-stamp information cell includes generating the time-stamp information cell utilizing a time-stamp generator.

Tanaka et al teaches an ATM test equipment operable as source and responder for conducting multiple tests. Furthermore, Tanaka et al teaches wherein generating the time-stamp information cell includes generating the time-stamp information cell utilizing a time-stamp generator (See page 3, paragraph [0035]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein generating the time-stamp information cell includes generating the time-stamp information cell utilizing a time-stamp generator as taught by Tanaka et al in view of Gruber et al in order to fill the data field of the shift register with time-stamp data using a time-of-day signal from a time-keeping unit (See page 3, paragraph [0035]).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,450,394 to Gruber et al in view of U.S. Patent Application No. 2003/0103763 to Sugimura et al.

a. As per claim 4, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein generating the time-stamp information cell includes generating a 20-bit time-stamp information cell.

Sugimura et al teaches wherein generating the time-stamp information cell includes generating a 20-bit time-stamp information cell (See pages 1 and 2, paragraph [0018]).

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It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein generating the time-stamp information cell includes generating a 20-bit time-stamp information cell as taught by Sugimura et al in order for the timing at which the packets are output can be adjusted on the basis of the time stamp at the time of reproduction (See page 2, paragraph [0018]).

8. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,450,394 to Gruber et al in view of U.S. Patent application No. 2002/0131484 to Diepstraten et al.

a. As per claim 5, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein generating the time-stamp information cell at a first location includes generating a time-stamp information cell at a first access multiplexer located at a beginning of the network link.

Diepstraten et al teaches wherein generating the time-stamp information cell at a first location includes generating a time-stamp information cell at a first access multiplexer located at a beginning of the network link (See page 3, paragraph [0042]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein generating the time-stamp information cell at a first location includes generating a time-stamp information cell at a first access multiplexer located

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at a beginning of the network link as taught by Diepstraten et al in the claimed invention of Gruber et al in order to improve synchronization between a transmitter and a receiver in the network (See page 1, paragraph [0005]).

b. As per claim 6, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein receiving the time-stamp information cell at a second location includes receiving a time-stamp information cell at a first access multiplexer located at an end of the network link.

Diepstraten et al teaches wherein receiving the time-stamp information cell at a second location includes receiving a time-stamp information cell at a first access multiplexer located at an end of the network link (See page 3, paragraph [0042]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein receiving the time-stamp information cell at a second location includes receiving a time-stamp information cell at a first access multiplexer located at an end of the network link as taught by Diepstraten et al in the claimed invention of Gruber et al in order to improve synchronization between a transmitter and a receiver in the network (See page 1, paragraph [0005]).

9. Claim 8-9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,450,394 to Gruber et al in view of U.S. Patent No. 6,553,015 to Sato.

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a. As per claim 8 and 13, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein transmitting the time-stamp information cell includes transmitting the time-stamp information cell mapped with a same virtual path identification as a data cell.

Sato teaches a high speed switching of communication links without interrupting ATM cell traffic. Furthermore, Sato teaches wherein transmitting the time-stamp information cell includes transmitting the time-stamp information cell mapped with a same virtual path identification as a data cell (See col. 5, lines 54-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein transmitting the time-stamp information cell includes transmitting the time-stamp information cell mapped with a same virtual path identification as a data cell as taught by Sato in the claimed invention of Gruber et al in order high speed switching of communication links without interrupting ATM cell traffic (See col. 1, lines 41-42).

b. As per claims 9 and 14, Gruber et al teaches the claimed invention as described above. However, Gruber et al failed to teach wherein transmitting the time-stamp information cell includes transmitting the time-stamp information cell mapped with a same virtual channel identification as the data cell.

Sato teaches wherein transmitting the time-stamp information cell includes transmitting the time-stamp information cell mapped with a same virtual channel identification as the data cell (See col. 5, lines 54-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein transmitting the time-stamp information cell includes transmitting the time-stamp information cell mapped with a same virtual channel identification as the data cell as taught by Sato in the claimed invention of Gruber et al in order high speed switching of communication links without interrupting ATM cell traffic (See col. 1, lines 41-42).

10. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,450,394 to Gruber et al in view of U.S. Patent Application No. 2004/0015735 to Norman.

a. As per claims 16 and 17, Gruber et al teaches the claimed invention as described above. Furthermore, Gruber et al teaches calculating a time-delay utilizing the time-stamp information cell; building a time-delay distribution array; calculating a time-delay variance utilizing the time-delay distribution array; calculating a cell-transfer rate utilizing a time-delay distribution array.

Norman et al teaches calculating a time-delay utilizing the time-stamp information cell; building a time-delay distribution array; calculating a time-delay variance utilizing the time-delay distribution array; calculating a cell-transfer rate utilizing a time-delay distribution array (See page 13, paragraph [0141]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate calculating a time-delay utilizing the time-stamp information cell; building a time-delay distribution array; calculating a time-delay variance utilizing the time-

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delay distribution array; calculating a cell-transfer rate utilizing a time-delay distribution array as taught by Norman et al in the claimed invention of Gruber et al in order to provide a highly redundant network of cells that allows a large array of cell to be organized with at least moderate yields of defect-free arrays (See page 3, paragraph [0020]).

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 2002/0131484 to Diepstraten et al in view of U.S. Patent Application No. 2001/0053130 to Tanaka et al.

a. As per claim 24, Diepstraten et al teaches the claimed invention as described above. However, Diepstraten failed to teach wherein the plurality of time delay information cells include a copy of a transmitted time delay-information cell.

Tanaka et al teaches wherein the plurality of time delay information cells include a copy of a transmitted time delay-information cell (See page 2, paragraph [0026]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the plurality of time delay information cells include a copy of a transmitted time delay-information cell as taught by Tanaka et al in the claimed invention of Diepstraten in order to determine the round-trip transit time between the nodes and loopback transmission quality (See page 2, paragraph [0026]).

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12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 2002/0131484 to Diepstraten et al in view of U.S. Patent No. 5,566,124 to Fudeyasu et al.

a. As per claim 27, Diepstraten et al teaches the claimed invention as described above. However, Diepstraten failed to teach wherein the set of counter includes a plurality of counters that are serially cascaded.

Fudeyasu et al teaches wherein the set of counter includes a plurality of counters that are serially cascaded (See col. 7, lines 1-9)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the set of counter includes a plurality of counters that are serially cascaded as taught by Fudeyasu et al in the claimed invention of Diepstraten et al in order to for the counter to constitute a 8- bit counter (see col. 7, lines 1-2).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djenane M Bayard whose telephone number is (571) 272-3878. The examiner can normally be reached on Monday- Friday 5:30 AM- 3:00 PM..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Djenane Bayard

Patent Examiner


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER